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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO	
10/083,717	02/25/2002	Lin-Feng Li	eVionyx-0015USAAON00 3959		
75	7590 02/13/2004		EXAMINER		
Evionyx, Inc.			CANTELMO, GREGG		
85 Executive Blvd. Elmsford, NY 10523			ART UNIT	PAPER NUMBER	
			1745		

DATE MAILED: 02/13/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

-5	Application No).	Applicant(s)	·			
	10/083,717		LI ET AL.				
Office Action Summary	Examiner		Art Unit	··········			
	Gregg Cantelm		1745				
The MAILING DATE of this communication P riod for Reply	appears on the cov	er sheet with the d	correspondence ade	dress			
A SHORTENED STATUTORY PERIOD FOR RE THE MAILING DATE OF THIS COMMUNICATIO - Extensions of time may be available under the provisions of 37 CFF after SIX (6) MONTHS from the mailing date of this communication. If the period for reply specified above is less than thirty (30) days, a If NO period for reply is specified above, the maximum statutory per - Failure to reply within the set or extended period for reply will, by standard processed by the Office later than three months after the mearned patent term adjustment. See 37 CFR 1.704(b).	DN. R 1.136(a). In no event, ho reply within the statutory n riod will apply and will expir	wever, may a reply be tin ninimum of thirty (30) day re SIX (6) MONTHS from n to become ABANDONE	nely filed s will be considered timely the mailing date of this co	: mmunication.			
Status							
1) Responsive to communication(s) filed on _							
2a) This action is FINAL . 2b) ⊠ 1	This action is non-fi	nal.					
·	lince this application is in condition for allowance except for formal matters, prosecution as to the merits is losed in accordance with the practice under <i>Ex parte Quayle</i> , 1935 C.D. 11, 453 O.G. 213.						
Disposition of Claims							
4) Claim(s) 1-22 is/are pending in the applicate 4a) Of the above claim(s) is/are with 5) Claim(s) is/are allowed. 6) Claim(s) 1-22 is/are rejected. 7) Claim(s) is/are objected to. 8) Claim(s) are subject to restriction and	drawn from conside						
Application Papers							
9) The specification is objected to by the Exam 10) The drawing(s) filed on 25 February 2002 is Applicant may not request that any objection to Replacement drawing sheet(s) including the col 11) The oath or declaration is objected to by the	s/are: a)⊠ accepte the drawing(s) be he rrection is required if	ld in abeyance. Se the drawing(s) is ob	e 37 CFR 1.85(a). ojected to. See 37 CF	R 1.121(d).			
Priority under 35 U.S.C. § 119							
12) Acknowledgment is made of a claim for fore a) All b) Some * c) None of: 1. Certified copies of the priority docum 2. Certified copies of the priority docum 3. Copies of the certified copies of the priority docum application from the International Bu * See the attached detailed Office action for a	nents have been re nents have been re priority documents reau (PCT Rule 17	ceived. ceived in Applicat have been receiv .2(a)).	ion No ed in this National	Stage			
Attachment(s)							
1) Notice of References Cited (PTO-892) 2) Notice of Draftsperson's Patent Drawing Review (PTO-948 3) Information Disclosure Statement(s) (PTO-1449 or PTO/SE Paper No(s)/Mail Date		=		D-152)			

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DETAILED ACTION

Priority

1. Applicant's claim for domestic priority to U.S. provisional application serial Nos. 60/270,952 and 60/270,816 are acknowledged.

Information Disclosure Statement

2. No IDS appears to have been filed with the application prior to this office action.

Drawings

 The informal drawings received February 25, 2002 are acceptable for examination purposes. If the application matures into a patent, formal drawings will be required.

Claim Rejections - 35 USC § 102

- 4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:
 - A person shall be entitled to a patent unless -
 - (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.
- 5. Claims 1, 2, 8, 13, 14 and 20-22 are rejected under 35 U.S.C. 102(b) as being anticipated by JP 62-069463-A (JP '463).

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JP '463 discloses an electrode comprising zinc fibers in the electrode (abstract as applied to claim 1).

The material is zinc (abstract as applied to claim 2).

The fibers are inherently either rectangular, square, triangular, "other polygonal", circular, elliptical, and combinations of such (as applied to claim 8).

The battery comprises first and second electrodes with an electrolyte in ionic contact between the electrodes. The zinc fibers incorporated into one of the electrodes (abstract as applied to claims 13 and 14).

The fibers are mixed with grains of the same material (abstract as applied to claim 20).

The material being zinc (abstract as applied to claim 21).

The battery is a zinc-air cell comprising first and second electrodes with an electrolyte in ionic contact between the electrodes. The zinc fibers incorporated into one of the electrodes (abstract as applied to claims 22).

6. Claims 1, 2, 4-8, 13-14 and 20 are rejected under 35 U.S.C. 102(b) as being anticipated by JP 58-019866-A (JP '866).

JP '866 discloses an electrode comprising iron fibers coated with nickel (abstract as applied to claim 1).

The conductive material includes the iron fibers (abstract as applied to claim 2).

The diameter of the fibers is 4-100 micrometers (abstract as applied to claims 4-7).

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The fibers are inherently either rectangular, square, triangular, "other polygonal", circular, elliptical, and combinations of such (as applied to claim 8).

The electrode is used in a battery, the battery inherently comprises first and second electrodes with an electrolyte in ionic contact between the electrodes. The nickel-coated iron fibers incorporated into one of the electrodes (abstract as applied to claims 13 and 14).

Additional cadmium active material is provided to the sintered nickel-coated iron body. The cadmium is introduced in a solution and the solvent is heated thereby leaving granules of the active material on and in the iron body (abstract as applied t claim 20).

7. Claims 1, 8 and 13-15 are rejected under 35 U.S.C. 102(b) as being anticipated by U.S. patent No. 4,215,190 (Ferrando).

Ferrando discloses an electrode comprising graphite fibers coated with nickel (abstract as applied to claim 1).

The fibers are inherently either rectangular, square, triangular, "other polygonal", circular, elliptical, and combinations of such (as applied to claim 8).

The battery comprises first and second electrodes with an electrolyte in ionic contact between the electrodes. The zinc fibers incorporated into one of the electrodes (Fig. 1 as applied to claims 13 and 14).

The fibers are graphite fibers which are coated with nickel metal (abstract as applied to claim 15).

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8. Claims 1-3 and 8-14 are rejected under 35 U.S.C. 102(b) as being anticipated by U.S. patent No. 3,853,625 (Louzos).

Louzos discloses an electrode comprising zinc fibers (abstract as applied to claim 1).

The metal includes zinc (abstract as applied to claim 2).

The zinc can further be alloyed with mercury (col. 16, II. 48-50 as applied to claim 3).

The fibers are either rectangular, square, triangular, "other polygonal", circular, elliptical, and combinations of such (col. 2, ll. 10-29 as applied to claim 8).

The length of the fibers range from about 1/8 to up to 4 inches, which is about 3.175 mm to about 101 mm (col. 2, II. 60-64 as applied to claims 9-12).

The battery comprises first and second electrodes with an electrolyte in ionic contact between the electrodes. The zinc fibers incorporated into one of the electrodes (Fig. 1 as applied to claims 13 and 14).

9. Claims 1, 2, 8, 13, 14, 16 and 20-22 are rejected under 35 U.S.C. 102(b) as being anticipated by U.S. patent No. 3,672,998 (Darland).

Darland discloses an electrode comprising zinc fibers in the electrode (abstract as applied to claim 1).

The material is zinc (abstract as applied to claim 2).

The fibers are inherently either rectangular, square, triangular, "other polygonal", circular, elliptical, and combinations of such (as applied to claim 8).

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The battery comprises first and second electrodes with an electrolyte in ionic contact between the electrodes. The zinc fibers incorporated into one of the electrodes (abstract and Fig. 2 as applied to claims 13 and 14).

The electrode is formed by mechanical method (col. 3, II. 40-43 as applied to claim 16).

The fibers are mixed with grains of the same material (abstract as applied to claim 20).

The material being zinc (abstract as applied to claim 21).

The battery is a zinc-air cell comprising first and second electrodes with an electrolyte in ionic contact between the electrodes. The zinc fibers incorporated into one of the electrodes (abstract as applied to claims 22).

10. Claims 1, 4, 5, 8-14 and 20-22 are rejected under 35 U.S.C. 102(b) as being anticipated by U.S. patent No. 4,263,383 (Coulombeau).

Coulombeau discloses an electrode comprising conductive fibers in the electrode (abstract and col. 2, line 15 as applied to claim 1).

The fibers have a diameter from 5-20 micrometers (col. 2, II. 41-46 as applied to claims 4 and 5).

The fibers are inherently either rectangular, square, triangular, "other polygonal", circular, elliptical, and combinations of such (as applied to claim 8).

The fibers have a length of 1.5 to 5 mm (col. 2, II. 41-45 as applied to claims 9-12).

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The battery comprises first and second electrodes with an electrolyte in ionic contact between the electrodes. The fibers incorporated into one of the electrodes (Fig. 3 and col. 3, II. 45-53 as applied to claims 13 and 14).

The fibers are mixed with grains of a zinc material (Fig. 2 and col. 3, II. 18-38 as applied to claim 20).

The material comprises zinc (col. 3, II. 18-38 as applied to claim 21).

The battery is a zinc-air cell comprising first and second electrodes with an electrolyte in ionic contact between the electrodes. The zinc fibers incorporated into one of the electrodes (abstract, Fig. 2, col. 3, II. 18-38, and col. 7, II. 1-4 as applied to claims 22).

11. Claims 1, 4-6, 8-14 and 20 are rejected under 35 U.S.C. 102(b) as being anticipated by U.S. patent No. 6,010,606 (Denton).

Denton discloses an electrode comprising conductive fibers in the electrode (abstract and col. 3, II. 51-56 as applied to claim 1).

The fibers have a diameter from 0.2-50 micrometers (col. 3, II. 51-56 as applied to claims 4-6).

The fibers are inherently either rectangular, square, triangular, "other polygonal", circular, elliptical, and combinations of such (as applied to claim 8).

The fibers have a length of 0.5-300, preferably 0.5-150mm (col. 2, II. 51-56 as applied to claims 9-12).

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The electrode is used in a fuel cell battery, the battery comprising first and second electrodes with an electrolyte in ionic contact between the electrodes. The fibers incorporated into one of the electrodes (as applied to claims 13 and 14).

The fibers are mixed with grains of a catalyst material (example 1 as applied to claim 20).

12. Claims 1, 2, 4, 5, 8-14 and 8-14 are rejected under 35 U.S.C. 102(b) as being anticipated by U.S. patent No. 3,702,019 (Pollack).

Pollack discloses an electrode comprising conductive metal fibers in the electrode (abstract as applied to claim 1).

The fibers are iron fibers (col. 2, II. 63-66 as applied to claim 2).

The fibers have a diameter from 0.0005-0.005 inches, which is 12.7-127 micrometers (col. 1, II. 35-40 as applied to claims 4 and 5).

The fibers are inherently either rectangular, square, triangular, "other polygonal", circular, elliptical, and combinations of such (as applied to claim 8).

The fibers have a length of 1/8 to 1.5 inches, which is equal to about 3.175-38 mm (col. 1, II. 35-40 as applied to claims 9-12).

The electrode can be used in a battery, a battery inherently comprises first and second electrodes with an electrolyte in ionic contact between the electrodes. The fibers are then incorporated into one of the electrodes (col. 5, II. 19-29 as applied to claims 13 and 14).

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13. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

- (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.
- 14. Claims 16 and 17 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over JP '463.

Claims 16 and 17 are drawn to product-by-process claims.

The teachings of claim 1, with respect to JP '463, have been discussed above and are incorporated herein. The end product of JP '463 being held to be the same as that of the instant claims, regardless of the method of forming the product.

"[E]ven though product-by-process claims are limited by and defined by the process, determination of patentability is based on the product itself. The patentability of a product does not depend on its method of production. If the product in the product-by-process claim is the same as or obvious from a product of the prior art, the claim is unpatentable even though the prior product was made by a different process." In re Thorpe, 777 F.2d 695, 698, 227 USPQ 964, 966 (Fed. Cir. 1985) (citations omitted).

"The Patent Office bears a lesser burden of proof in making out a case of prima facie obviousness for product-by-process claims because of their peculiar nature" than when a product is claimed in the conventional fashion. In re Fessmann, 489 F.2d 742, 744, 180 USPQ 324, 326 (CCPA 1974). Once the Examiner provides a rationale tending to show that the claimed product appears to be the same or similar to that of the prior art, although produced by a different process, the burden shifts to applicant to

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come forward with evidence establishing an unobvious difference between the claimed product and the prior art product. In re Marosi, 710 F.2d 798, 802, 218 USPQ 289, 292 (Fed. Cir. 1983). Ex parte Gray, 10 USPQ2d 1922 (Bd. Pat. App. & Inter. 1989). See MPEP section 2113.

15. Claims 16 and 17 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Coulombeau.

Claims 16 and 17 are drawn to product-by-process claims.

The teachings of claim 1, with respect to Coulombeau, have been discussed above and are incorporated herein.

The end product of Coulombeau being held to be the same as that of the instant claims, regardless of the method of forming the product.

"[E]ven though product-by-process claims are limited by and defined by the process, determination of patentability is based on the product itself. The patentability of a product does not depend on its method of production. If the product in the product-by-process claim is the same as or obvious from a product of the prior art, the claim is unpatentable even though the prior product was made by a different process." In re Thorpe, 777 F.2d 695, 698, 227 USPQ 964, 966 (Fed. Cir. 1985) (citations omitted).

"The Patent Office bears a lesser burden of proof in making out a case of prima facie obviousness for product-by-process claims because of their peculiar nature" than when a product is claimed in the conventional fashion. In re Fessmann, 489 F.2d 742, 744, 180 USPQ 324, 326 (CCPA 1974). Once the Examiner provides a rationale tending to show that the claimed product appears to be the same or similar to that of the

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prior art, although produced by a different process, the burden shifts to applicant to come forward with evidence establishing an unobvious difference between the claimed product and the prior art product. In re Marosi, 710 F.2d 798, 802, 218 USPQ 289, 292 (Fed. Cir. 1983). Ex parte Gray, 10 USPQ2d 1922 (Bd. Pat. App. & Inter. 1989). See MPEP section 2113.

16. Claims 16-18 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Pollack.

Claims 16-18 are drawn to product-by-process claims. Claim 18 provides structure to the claim along with process limitations. For example claim 18 to forming a fiber mat.

The teachings of claim 1, with respect to Pollack, have been discussed above and are incorporated herein.

Pollack further forms a fiber mat or plaque (col. 2, II. 29-32 and Figs. 1 and 4 as applied to claim 18). The end product of Pollack being held to be the same as that of the instant claims, regardless of the method of forming the product.

"[E]ven though product-by-process claims are limited by and defined by the process, determination of patentability is based on the product itself. The patentability of a product does not depend on its method of production. If the product in the product-by-process claim is the same as or obvious from a product of the prior art, the claim is unpatentable even though the prior product was made by a different process." In re Thorpe, 777 F.2d 695, 698, 227 USPQ 964, 966 (Fed. Cir. 1985) (citations omitted).

"The Patent Office bears a lesser burden of proof in making out a case of

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prima facie obviousness for product-by-process claims because of their peculiar nature" than when a product is claimed in the conventional fashion. In re Fessmann, 489 F.2d 742, 744, 180 USPQ 324, 326 (CCPA 1974). Once the Examiner provides a rationale tending to show that the claimed product appears to be the same or similar to that of the prior art, although produced by a different process, the burden shifts to applicant to come forward with evidence establishing an unobvious difference between the claimed product and the prior art product. In re Marosi, 710 F.2d 798, 802, 218 USPQ 289, 292 (Fed. Cir. 1983). Ex parte Gray, 10 USPQ2d 1922 (Bd. Pat. App. & Inter. 1989). See MPEP section 2113.

17. Claims 16-18 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over JP '866.

Claims 16-18 are drawn to product-by-process claims. Claim 18 provides structure to the claim along with process limitations. For example claim 18 to forming a fiber mat.

The teachings of claim 1, with respect to JP '866, have been discussed above and are incorporated herein.

JP '866 further forms a fiber body, i.e. a mat (abstract as applied to claim 18). The end product of JP '866 being held to be the same as that of the instant claims, regardless of the method of forming the product.

"[E]ven though product-by-process claims are limited by and defined by the process, determination of patentability is based on the product itself. The patentability of a product does not depend on its method of production. If the product in the product-by-

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process claim is the same as or obvious from a product of the prior art, the claim is unpatentable even though the prior product was made by a different process." In re Thorpe, 777 F.2d 695, 698, 227 USPQ 964, 966 (Fed. Cir. 1985) (citations omitted).

"The Patent Office bears a lesser burden of proof in making out a case of prima facie obviousness for product-by-process claims because of their peculiar nature" than when a product is claimed in the conventional fashion. In re Fessmann, 489 F.2d 742, 744, 180 USPQ 324, 326 (CCPA 1974). Once the Examiner provides a rationale tending to show that the claimed product appears to be the same or similar to that of the prior art, although produced by a different process, the burden shifts to applicant to come forward with evidence establishing an unobvious difference between the claimed product and the prior art product. In re Marosi, 710 F.2d 798, 802, 218 USPQ 289, 292 (Fed. Cir. 1983). Ex parte Gray, 10 USPQ2d 1922 (Bd. Pat. App. & Inter. 1989). See MPEP section 2113.

18. Claims 16-18 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Denton.

Claims 16-18 are drawn to product-by-process claims. Claim 18 provides structure to the claim along with process limitations. For example claim 18 to forming a fiber mat.

The teachings of claim 1, with respect to Denton, have been discussed above and are incorporated herein.

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Denton further forms a fiber mat or as the gas diffusion electrode (as applied to claim 18). The end product of Denton being held to be the same as that of the instant claims, regardless of the method of forming the product.

"[E]ven though product-by-process claims are limited by and defined by the process, determination of patentability is based on the product itself. The patentability of a product does not depend on its method of production. If the product in the product-by-process claim is the same as or obvious from a product of the prior art, the claim is unpatentable even though the prior product was made by a different process." In re Thorpe, 777 F.2d 695, 698, 227 USPQ 964, 966 (Fed. Cir. 1985) (citations omitted).

"The Patent Office bears a lesser burden of proof in making out a case of prima facie obviousness for product-by-process claims because of their peculiar nature" than when a product is claimed in the conventional fashion. In re Fessmann, 489 F.2d 742, 744, 180 USPQ 324, 326 (CCPA 1974). Once the Examiner provides a rationale tending to show that the claimed product appears to be the same or similar to that of the prior art, although produced by a different process, the burden shifts to applicant to come forward with evidence establishing an unobvious difference between the claimed product and the prior art product. In re Marosi, 710 F.2d 798, 802, 218 USPQ 289, 292 (Fed. Cir. 1983). Ex parte Gray, 10 USPQ2d 1922 (Bd. Pat. App. & Inter. 1989). See MPEP section 2113.

19. Claims 16-19 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Darland.

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Claims 16-19 are drawn to product-by-process claims. Claim 18 provides structure to the claim along with process limitations. For example claim 18 to forming a fiber mat and claim 19 to laminating the mat to a substrate.

The teachings of claim 1, with respect to Darland, have been discussed above and are incorporated herein.

Darland further forms a fiber mat and attaches the mat to a carrier (col. 3, ll. 40-52 as applied to claims 18 and 19). The end product of Darland being held to be the same as that of the instant claims, regardless of the method of forming the product.

"[E]ven though product-by-process claims are limited by and defined by the process, determination of patentability is based on the product itself. The patentability of a product does not depend on its method of production. If the product in the product-by-process claim is the same as or obvious from a product of the prior art, the claim is unpatentable even though the prior product was made by a different process." In re Thorpe, 777 F.2d 695, 698, 227 USPQ 964, 966 (Fed. Cir. 1985) (citations omitted).

"The Patent Office bears a lesser burden of proof in making out a case of prima facie obviousness for product-by-process claims because of their peculiar nature" than when a product is claimed in the conventional fashion. In re Fessmann, 489 F.2d 742, 744, 180 USPQ 324, 326 (CCPA 1974). Once the Examiner provides a rationale tending to show that the claimed product appears to be the same or similar to that of the prior art, although produced by a different process, the burden shifts to applicant to come forward with evidence establishing an unobvious difference between the claimed product and the prior art product. In re Marosi, 710 F.2d 798, 802, 218 USPQ 289, 292

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(Fed. Cir. 1983). Ex parte Gray, 10 USPQ2d 1922 (Bd. Pat. App. & Inter. 1989). See MPEP section 2113.

20. Claims 16-19 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Louzos.

Claims 16-19 are drawn to product-by-process claims. Claim 18 provides structure to the claim along with process limitations. For example claim 18 to forming a fiber mat and claim 19 to laminating the mat to a substrate.

The teachings of claim 1, with respect to Louzos, have been discussed above and are incorporated herein.

Louzos further forms a fiber mat (Fig. 1) and attaches the mat to a carrier 16.

The end product of Louzos being held to be the same as that of the instant claims, regardless of the method of forming the product.

"[E]ven though product-by-process claims are limited by and defined by the process, determination of patentability is based on the product itself. The patentability of a product does not depend on its method of production. If the product in the product-by-process claim is the same as or obvious from a product of the prior art, the claim is unpatentable even though the prior product was made by a different process." In re Thorpe, 777 F.2d 695, 698, 227 USPQ 964, 966 (Fed. Cir. 1985) (citations omitted).

"The Patent Office bears a lesser burden of proof in making out a case of prima facie obviousness for product-by-process claims because of their peculiar nature" than when a product is claimed in the conventional fashion. In re Fessmann, 489 F.2d 742, 744, 180 USPQ 324, 326 (CCPA 1974). Once the Examiner provides a rationale

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tending to show that the claimed product appears to be the same or similar to that of the prior art, although produced by a different process, the burden shifts to applicant to come forward with evidence establishing an unobvious difference between the claimed product and the prior art product. In re Marosi, 710 F.2d 798, 802, 218 USPQ 289, 292 (Fed. Cir. 1983). Ex parte Gray, 10 USPQ2d 1922 (Bd. Pat. App. & Inter. 1989). See MPEP section 2113.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Gregg Cantelmo whose telephone number is (571) 272-1283. The examiner can normally be reached on Monday to Thursday from 9 a.m. to 6 p.m. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Pat Ryan, can be reached on (571) 272-1292. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306. FAXES received after 4 p.m. will not be processed until the following business day. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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Gregg Cantelmo Patent Examiner Art Unit 1745

gc

February 9, 2004